

~~Method of Producing a Micro-Electromechanical Element~~

ABSTRACT

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In a method of producing a micro-electromechanical element a first intermediate layer ~~(4; 24)~~, which is applied to a first main surface of a first semiconductor wafer ~~(2; 26)~~, is structured in a first step so as to produce a recess ~~(6; 20, 22, 30)~~. The first semiconductor wafer ~~(2; 26)~~ is connected via the first intermediate layer ~~(4; 24)~~ to a second semiconductor wafer ~~(8; 28)~~ in such a way that a hermetically sealed cavity ~~(12; 20, 22)~~ is defined by the recess. When one of the wafers ~~(2; 26)~~ has been thinned from a surface facing away from said first intermediate layer ~~(4; 24)~~ so as to produce a diaphragm-like structure ~~(14; 32, 36)~~ on top of the cavity, electronic components are produced in said thinned semiconductor wafer making use of standard semiconductor processes. At least one further intermediate layer between the two semiconductor wafers is provided, which, prior to the connection of the two semiconductor wafers, is structured in such a way that the structure formed in said at least one further intermediate layer and the recess in said first intermediate layer define the cavity. Finally at least one defined opening ~~(36)~~ is produced so as to provide access to the hermetically sealed cavity ~~(12; 20, 22, 30)~~.